

Appln. No. 10/619,299
Amendment dated: October 6, 2005
Response to Office Action dated August 9, 2005

REMARKS

These remarks are in response to the Office Action dated August 9, 2005. This reply is timely filed. At the time of the Office Action, claims 1-23 were pending in the application. Applicant notes with appreciation that claims 1-22 have been allowed. Claim 23 was rejected under 35 U.S.C. § 102(b). The rejections are set out in more detail below. In response to Examiner's rejection, claim 23 has now been amended.

I. Brief Review of Applicants' Invention

Prior to addressing the Examiners rejections, a brief review of Applicants' invention is appropriate. The invention relates to a compact slotted cylinder antenna, which may be configured to have an omni-directional radiation pattern, a cardioid radiation pattern, or a hybrid of the two. The near field impedance of the antenna is significantly lower than the impedance of human tissue. Accordingly, the antenna can be operated in proximity to a human body without significant coupling between the antenna and the body. In consequence, the risk of harmful side effects on the body due to radio frequency (RF) energy propagated by the antenna is minimized.

The compact slotted cylinder antenna comprises a single radiating member and an impedance matching device electrically connected to the radiating member by a conductor. The single radiating member, impedance matching device and conductor can be integrally formed from a single conductive sheet. Accordingly, the antenna can be produced at low cost.

II. Claim Rejection Under 35 U.S.C. §102(b)

Claim 23 has been rejected under 35 U.S.C. § 102(b) as being unpatentable over U.S. Patent No. 3,790,942 to Becavin, et al. (hereinafter "Becavin, et al."). Becavin et al. relates to a radio beacon with a rotating cardioid radiation pattern of the VOR type (col. 1 lines 6-9). The Becavin et al. invention requires two radiator elements plus a single rotating element for the production of the rotary lobe (col. 1 lines 28-41). The first radiating element is used to radiate the rotating lobe, while the second radiating

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antenna element is used to radiate the fixed lobe (col. 2 lines 3-7). The combination of rotating and fixed lobes produces the rotating cardioid radiation pattern (col. 4 lines 44-47). In contrast, Applicants' amended claim 23 recites an antenna that comprises a single radiation element that is arranged to produce a lobed cardioid radiation pattern. Claim 23 now also recites the structure of the radiation element with greater particularity. Specifically, the radiation element is recited as comprising a continuous sheet of an electrically conductive material that has a slot extending from a first portion of the radiation element to a second portion of the radiation element. The continuous sheet of the radiation element is also recited as being shaped to define a substantially tubular form so as to define a cavity therein. Support for this amendment is found in Applicants' specification.

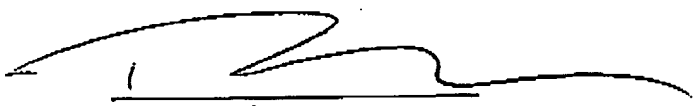
V. Conclusion

It is believed that amended claim 23 is in condition for allowance. Nevertheless, Applicants invite the Examiner to call the undersigned if it is believed that a telephonic interview would expedite the prosecution of the application to an allowance. In view of the foregoing remarks, Applicants respectfully request reconsideration and prompt allowance of the pending claims.

Although no fee is believed due, the Commissioner is hereby authorized to charge any fees which may be due by submission of this document to Deposit Account No. 50-2884.

Respectfully submitted,

10-6-05
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